MEPS for Incandescent Lamps

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Disclaimer

- This is a work in progress
- Some details of this program will be subject to change
- This program has industry support but still requires final government approval

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International Emissions

- Incandescent lamps:
  - GHG emissions = 560 Mt p.a.[1]
- Switching to CFLs (or similar):
  - GHG emissions savings = 470 Mt p.a. [1]
  - Power stations not required = 38 [2]
  - Cars off the road = 118 million [3]
  - Trees planted per annum = 470 million [4]

1. International Energy Agency report, October 2006
2. 4 x 660MW power station, 90% availability
3. Estimated average car emits 4 tonnes CO2e p.a.
4. Estimated average tree sequesters 1 tonne CO2e over its lifetime

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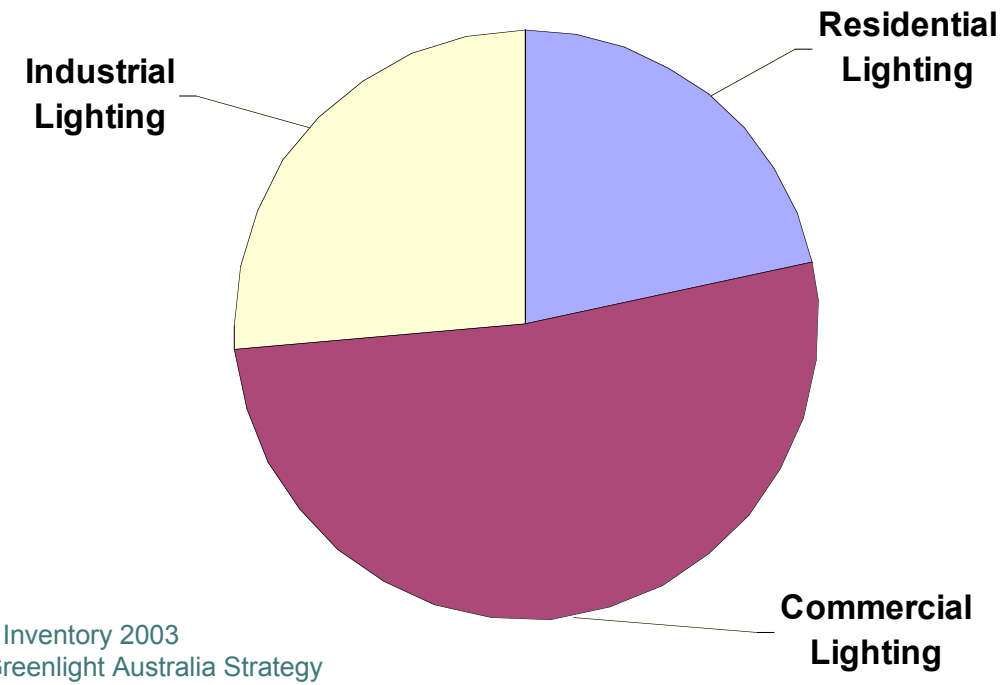
Australian Emissions

- 45 MT CO_2e p.a. from passenger cars [1]
- 25 MT CO_2e p.a. from lighting [2]



1. National Greenhouse Gas Inventory 2003
2. Modeling undertaken for Greenlight Australia Strategy

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Australian Emissions [cont]

- Incandescent lamps:
  - GHG emissions = 6 Mt p.a. [1]
- Switching to CFLs:
  - GHG emissions savings = 4 Mt p.a. [1]
  - Cars off the road = 1 million [2]
  - Trees planted per annum = 4 million [3]

1. Modeling undertaken for Greenlight Australia Strategy
2. Estimated average car = 4 tonnes CO2e p.a.
3. Estimated average tree sequesters 1 tonne CO2e over its lifetime

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Objective

- Objective:
  - Eliminate inefficient incandescent lamps from the Australian marketplace
  - NOT technology specific
  - Must result in LOWER POWER lamps
    - Success will be measured by this
- Scope:
  - Incandescent, halogen, LED, etc.
  - Reflector & non-reflector
  - CFLs subject to separate MEPS

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Philosophy

- February 2007 - Australian Government announced phase-out of inefficient incandescent lamps
- Lamp efficacy target of 20 lumens/watt* has since been agreed with Lighting Council Australia
- Majority of general purpose lamps to conform to this level by 2014

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Phase 1: 2008-2014

- 1 October 2008:
  - These lamps must meet 20 lm/w curve*:
    - IEC bulb designations A55-A60-PS60, M50 and M60 (& possibly others)
    - >220 volts
    - Caps E26, E27 or B22d
  - Desired result:
    - Conventional GLS lamps effectively eliminated from Australian marketplace
    - **CFLs dominate**
    - Some mains voltage halogen lamps remain (see 2 slides over)

*Note that 20 lm/w is for 1200 lm (60w) lamp. Efficacy requirement will be a curve based on lamp light output

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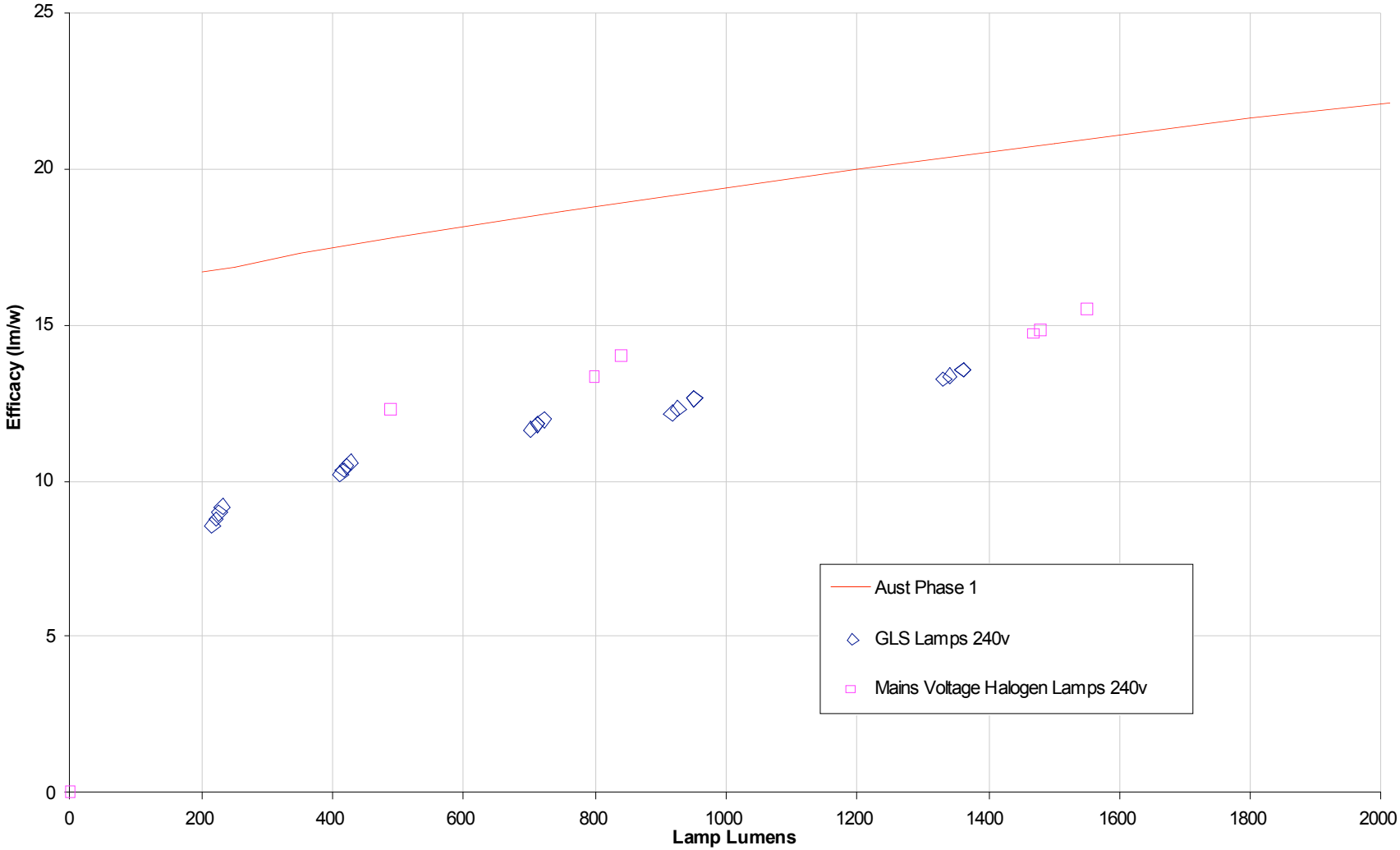

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Phase 1 (cont)

- Dimmed circuits:
  - Australian 2-wire dimmers not currently compatible with CFLs
  - Continue to allow mains voltage halogen lamps to be sold (approx 20% higher efficacy)
  - Further technical issues currently being resolved

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Phase 1 (cont)

- Expand scope to meet 20 lm/w:
  - 2010:
    - candle-shaped, fancy rounds, etc.
  - 2012:
    - mains voltage halogen (resolve CFL dimming)
    - Incandescent reflector lamps (PAR, R, ER, etc.)
  - 2014:
    - Pilot lamps, refrigerator and oven lamps
- By 2014, all general purpose incandescent lamps must meet 20 lm/w*

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Phase 1 (cont)

- Review lamp scope yearly:
  - Committee of lighting industry & government representatives
  - Lamp types only included in scope where viable, efficient alternatives exist
- Include quality requirements:
  - Lamp life (e.g. 2000 hours)
  - Lumen depreciation (e.g. 80% at 2000 hours)
- Government will monitor lamp market to ensure unintended or perverse consequences are anticipated and dealt with quickly (e.g. mains voltage halogen sales dominate CFLs)

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Phase 2: 2016+

- Second phase of incandescent lamp MEPS
- More stringent efficacy requirements – e.g. 35+ lm/w

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Other Projects in Development – The Greenlight Australia Strategy

- Incandescent Lamps
- LV Halogen Lamps & Voltage Converters
- CFLs
- Commercial & Industrial Luminaires
- Linear Fluorescent Lamps (Second Round MEPS)
- Main Road Lighting
- HID Lamps and Ballasts

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